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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/080,156	02/19/2002	Olaf Jose F. Hirsch	US 028003	9302
65913	7590	10/26/2007		
NXP, B.V. NXP INTELLECTUAL PROPERTY DEPARTMENT M/S41-SJ 1109 MCKAY DRIVE SAN JOSE, CA 95131			EXAMINER ELALLAM, AHMED	
			ART UNIT 2616	PAPER NUMBER
			NOTIFICATION DATE 10/26/2007	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ip.department.us@nxp.com

## Office Action Summary

**Application No.**

10/080,156

**Applicant(s)**

HIRSCH ET AL.

**Examiner**

AHMED ELALLAM

**Art Unit**

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites "a beacon frame indicating the beginning of a first period during which the first station is not allowed to contend for medium access, followed by a contention period during which the first station is allowed to contend for medium access, and the first period comprises a contention sub-period during which the second station is enabled to transmit data modulated according to the second modulation". From the above passage it appears that the non-contention period has point coordination function (PCF) (as understood from the specification and in accordance with WLAN standards (802.11)), however such non-contention period is indicated to comprise a contention sub-period following a distributed coordination function (DCF), it appears that both PCF (non-contention) and DCF (contention) are simultaneously used within the same non-contention period which is absurd given the contradictory presence of PCF and DCF within a same period (sub-period). Further, the meaning of sub-contention period being part of the non-contention period is confusing and indefinite because the common

definition of non-contention period is understood to have no contention between stations as defined in the WLAN standards (802.11),

Independent claims 12 and 20 have similar limitations and are subject to the same rejections.

Note: the claimed " contention-free period followed by a contention period, and, the contention-free period comprises a sub-contention period" is interpreted hereinafter to mean "***contention-free period followed by a contention period, and, the contention period comprises a sub-contention period***". Examiner believes it is more appropriate to interpret the claimed limitation as such, because the sub-contention period would commonly belong to a contention period. In addition, the specification discloses that the stations 1-3 (DSSS/CCK stations) do not send data during the sub-contention period, that is the sub-contention period doesn't belong to a free contention period.

Claims 2-11, and 13-19 depend from rejected respective claims 1 and 12, thus they are subject to the same rejections.

Additionally, as to independent claims 1, 12 and 20, it is not clear if the features of "the sub-period during which the second station is enabled to transmit data according to second modulation scheme following a distributed coordination function access mechanism" is also indicated by the beacon frame or not, stated differently it is not clearly specified whether or not the first station need to know, *inter alias*, about the second station using a DCF as part of the beacon frame indication?.

### ***Double Patenting***

2. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

3. Claims 1- 4, 11-14, and 20 are objected to under 37 CFR 1.75 as being a substantial duplicate of claims 12-21 of US Patent 7,274,707. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

4. Claims 1- 4, 11-14, and 20 of this application conflict with claims 12-22 of Application No. 7,274,707. 37 CFR 1.78(b) provides that when two or more applications filed by the same applicant contain conflicting claims, elimination of such claims from all but one application may be required in the absence of good and sufficient reason for their retention during pendency in more than one application. Applicant is required to either cancel the conflicting claims from all but one application or maintain a clear line of demarcation between the applications. See MPEP § 822.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-7, 11-15, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Young et al, US (6,990,116) in view of Admitted Prior Art, specification paragraphs [002-[003]. Hereinafter, referred to as Young and APA respectively.

Regarding claims 1, 12 and 20, with reference to figure1 and 5, Young discloses an access point AP-A 112 and a plurality of end stations A-1-A-n that are connected through a wireless connection, see column 4, lines 16-26; Young also discloses a contention free period 520 followed by a contention period 530, wherein a point coordinator at the access point sends a beacon frame 525 to all the stations in its BSS (Base Station Subsystem), the beacon frame communicates to the stations the length of the contention-free period, where the point coordinator controls the medium during the PCF access period 527, which is followed by contention period the contention period in accordance with DCF access (Distributed Coordination Function), see column 8, lines 20-31. (Examiner interpreted the communication of the length of the contention-free period to all the stations as being the claimed *beacon frame indicating contention-free period followed by a contention period, and, the contention period comprises a sub-contention period*, because of the periodical repetition of the

beacon frame, the contention period is implicitly indicated as part of the contention free period indication).

Young doesn't specify a first station using a first modulation scheme and a second station using a second modulation scheme, the second station using the second modulation scheme during the sub-contention period (Notes: claims 1, 12, and 20 do not specify the first modulation scheme and second modulation scheme are different, thus the first and second modulation schemes can be the same).

However, APA specifies modulation schemes such as DSSS/CKK supported by IEEE 802.11 standard or OFDM modulation scheme as specified by IEEE 802.11a standard. It would have been obvious to a person of ordinary skill in the art, at the time the invention was made to have the mobile stations of Young use specific modulation scheme during the contention period as specified by APA so that the WLAN of Young can utilize the standard Wireless LAN protocols. The advantage would be the implementation of the well-established WLAN protocols in Young's WLAN.

Regarding claims 2 and 13, APA discloses DSSS/CKK modulation being established as part of IEEE 802.11 standard. See [002].

Regarding claims 3 and 14, APA discloses IEEE 802.11a standard defines a physical layer based on the orthogonal frequency division multiplexing (OFDM).

Regarding claim 4, with reference to figure 5, Young shows that the contention period 530 occurs at the end of the contention free period 527.

Regarding claims 5-7 and 15, Young discloses having the access point dynamically adjust the appropriate access mechanism (DCF or PCF) (point

coordination function or Distributed coordination function) based on load conditions, including the number of stations, see column 8, lines 47-67 and column 9, lines 1-10, see also figure 6.

Regarding claim 11, Young discloses the WLAN operating under IEEE 802.11 specification. (See column 2, lines 36-40).

6. Claims 8, 9, 10, 16, 17, 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Young in view of APA as applied to respective claims 1 and 12 above, and further in view of Cimini, JR. et al, US 2003/0152058. Hereinafter referred to as Cimini.

Regarding claims 8, 16 and 18, as discussed above, Young in view of APA discloses substantially all the limitation of claims 8, 16 and 18 except that they do not disclose that during the contention period, the access point sends a request-to-send frame comprising information representative of second modulation scheme (as in claims 8 and 16) and the access point receives a request-to-send frame from the second station comprising information representative of second modulation scheme (as in claim 18).

Regarding claims 9 and 17, as discussed above, Young in view of APA discloses substantially all the limitation of claims 9 and 17 except that they do not disclose that during contention period, the second station transmits request-to-send and clear-to-send frames modulated according to the second modulation scheme.

As to claims 8, 9, 16 and 17:



Cimini discloses that the DCF (Distributed coordination function) with Request to Send (RTS)/Clear to Send (CTS) has been standardized, and that The RTS/CTS is a natural choice for adaptive coding/modulation. See paragraph [0031]. (The DCF access is implemented during the contention period as part of IEEE 802.11 standard). (Claimed the access point sends a request-to-send frame comprising information representative of second modulation scheme, during the contention period, as in claims 8 and 16, and the second station transmits request-to-send and clear-to-send frames modulated according to the second modulation scheme, during the contention period as in claim 17 (A modulation is necessary for exchanging the RTS/CTS by the wireless unit during the contention period) and the claimed access point receives a request-to-send frame from the second station comprising information representative of second modulation scheme as in claim 18) . It would have been obvious to a person of ordinary skill in the art, at the time the invention was made to have the stations of Young implement the standardized RTS/CTS during the DCF (claimed contention period) so that the exchange of channel information (coding/modulation information) would take effect prior to the data transmission begins. The advantage would be the provisioning of accurate rate adaptation and coding in the system of Young in view of APA. (See Cimini [0031].

Regarding claims 10 and 19, Cimini discloses that RTS/CTS is a natural choice for adaptive coding/modulation because the RTS/CTS pair (access point, wireless station) can exchange channel information before the data packet transmission begins so that accurate rate adaptation can occur. (Claimed the access point received from

the second station an information field representative of the second modulation capability when the second station joins the local area network).

### ***Response to Arguments***

7. Applicant's arguments filed 6/21/2007 have been fully considered but they are not persuasive.

Applicants' argument appears to be directed to a different Application. Therefore the argument presented is not given weight.

### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: See form PTO-892.

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to AHMED ELALLAM whose telephone number is (571) 272-3097. The examiner can normally be reached on 7-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi H. Pham can be reached on (571) 272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Examiner  
Art Unit 2616  
10/17/07

1.

  
CHI PHAM  
SUPERVISORY PATENT EXAMINER 10/22/07